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ABSTRACT

This paper is a followup study of freshman on the Twin Cities campus of the University of Minnesota. The first study was done in 1968 on the 1967 freshman class. The present study uses basically the same data as the 1968 report including distribution by college and sex, age distribution, parental occupations, paternal education, maternal education, comparison of maternal-paternal levels of education, ability characteristics of entering freshman, high school rank, Minnesota Scholastic Aptitude Test percentile rank, high school grade-point average, American College Testing Program examinations, and financing of education. Comparisons are made between the 1967 and 1973 freshmen to see if any changes occurred. (Author/MJM)

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THE UNIVERSITY OF MINNESOTA TWIN CITIES CAMPUS

FRESHMAN CLASS OF 1973

WITH COMPARISONS TO THE FRESHMAN CLASS OF 1967

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Abstract

This paper is a follow-up study of freshman on the Twin Cities campus of the University of Minnesota. The first study was done by Dr. Ralph Berdie in 1968 on the 1967 freshman class. The present study uses basically the same data base as the 1968 report. Comparisons are made between the 1967 and 1973 freshmen to see if any changes occurred. This report includes tables based on official Admissions and Records freshman statistical reports.

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Introduction

In 1968, Berdie did a study, "The University of Minnesota Freshmen Class of 1967", based on Admissions and Records freshman statistical reports for Fall Quarter, 1967. Now, six years later, another look at University of Minnesota Twin Cities campus freshmen is advisable, as these six years have seen changes at the University of Minnesota.

This study looks at the freshman statistical reports published by the Office of Admissions and Records for Fall, 1973, and makes comparisons of 1973 and 1967 freshmen to see what changes have transpired.

Berdie observed in 1968 that University of Minnesota freshmen were intellectually capable, competent to face academic challenges, and able to understand abstract concepts and ideas. This is still true. Freshmen in 1973 were probably aware of the college ferment of the previous six years and were therefore more aware of their campus environment than were previous freshman groups. The 1973 freshmen came from homes where parents had slightly more education than did those in 1967, and more of these parents were in professional occupations than were their 1967 counterparts. In spite of the slightly improved socio-economic levels of parents, finances were still a problem for the 1973 freshmen, due to rapidly rising costs of post-secondary education.

For the freshman profile, a few new tables have been added to the 1973 study. Since cost increasingly is a major factor in gaining a college education, a table representing sources of income was added. More than one-half of all 1973 freshmen worked and had either loans or scholarships (Table 12). Another new table shows the demographic patterns of the 1973 freshmen by college and sex. Sixty-four percent were enrolled in the College of Liberal Arts. In 1973, women accounted for 43% of the freshman class (Table 1).

Demographic Profile of Fall, 1973, Freshmen

Attending the Twin Cities Campus

Distribution by College and Sex

TABLE 1

College Distribution for Entering Freshmen, 1973 (Fall)

College	Male	Female	Total	%
Liberal Arts	1852	1855	3707	69
Technology	613	51	664	13
General	252	246	498	9
Agriculture	161	91	252	5
Home Economics	3	169	172	3
Forestry	57	13	70	1
N (Twin Cities Only)	2938	2425	5363	
Sex Percent	55	45		100

The total enrollment for Fall Quarter, 1973, was 41,005. Of that total, 5,363 (13%) were freshmen. The distribution among the six new high school freshman-admitting Twin Cities colleges was as follows: the College of Liberal Arts, 3,707; the Institute of Technology, 664; General College, 498; the College of Agriculture, 252; the College of Home Economics, 172; the College of Forestry, 70 (Table 1). Of this freshman enrollment, 55% were males, and 45% were females. The freshman enrollment in 1967 was 8,414, which was 22% of the total enrollment of 38,245. This shows a decrease in freshman enrollment of nine percentage points since 1967.

Distribution by Age

TABLE 2

Age Distribution of Entering Freshmen, 1973 (Fall)

Sexes Combined

Age	Colleges					
	CLA %	IT %	GC %	AFHE %	All Colleges[1] %	U.S. Colleges[2] %
16	1	1	0	0	0	0
17	18	20	12	15	15	4
18	68	71	50	78	69	80
19	7	4	15	4	7	14
20	2	1	6	0	3	1
21	1	1	3	1	2	0
22	1	0	3	0	1	0
23	1	1	2	1	1	0
24	0	1	2	0	1	0
25 & up	1	1	7	1	1	0
N	3130	557	672	419	7028	--

[1]All campuses.

[2]From 1973 American Council on Education (ACE) study.

Table 2 gives the age distributions for the four largest freshman-admitting colleges (i.e., the College of Liberal Arts, the Institute of Technology, General College, and the Colleges of Agriculture, Forestry and Home Economics combined) and for all colleges. Besides the Twin Cities, the "All Colleges" column includes Duluth, Morris, Waseca and Crookston freshmen. For

the four colleges, two-thirds or more were 18 years of age, less than one-fifth were 17, and only two of the colleges (the College of Liberal Arts and the Institute of Technology) had one percent at age 16. For all colleges, 10% were 19 to 20 years old. General College had the most students in this age group (20%), and the Colleges of Agriculture, Forestry, and Home Economics combined had the least (four percent). For the 21 years old and over group, there were six percent across all colleges, but the College of Liberal Arts, the Institute of Technology, and the Colleges of Agriculture, Forestry and Home Economics combined had only three to four percent in this category. The General College had 17% in the over 21 group, of which seven percent were in the 25 and over age bracket. Except for General College, the freshmen were homogeneous in age, since over 80% of them were in the 19 to 20 age level.

Parental Occupations

TABLE 3

Parental Occupations of Entering Freshmen, 1973 (Fall)

Sexes Combined

Occupation	Colleges				
	CLA %	IT %	GC %	AFHE %	All Colleges[1] %
Professional	29	34	15	31	24
Owns or Manages Business	16	13	16	10	14
Office or Clerical	4	4	6	6	4
Sales	11	9	13	10	10
Owns or Manages Farm	3	4	2	16	6
Skilled	25	28	27	11	22
Semi-Skilled	5	4	6	8	6
Unskilled	0	0	0	5	3
Other	7	4	15	3	11
N	2954	526	608	402	6664

[1]All campuses.

Occupations of students' parents suggest the economic levels from which the freshmen come. The 1973 study shows an increase in the "professional" classification since the 1968 study.

One-fourth (24%) of all college freshmen have parents whose occupations are in the "professional" category. Students in the Institute of Technology have the highest percentage of parents who are professional (34%); General College students have the lowest (15%). About one-third (29%-31%) of the students in the College of Liberal Arts and in the combined Colleges of Agriculture, Forestry, and Home Economics have professional parents.

The next largest occupational unit is "skilled". In 1967, the "skilled" had the highest percentage (26%) for freshman parental occupations. For 1973, the percentage for all colleges was 22%. This change has important implications in terms of enrollment policies and the shift in our campus population economic pattern. Table 3 shows that the College of Liberal Arts, the Institute of Technology, and General College each have about one-fourth in the "skilled" occupations. The Colleges of Agriculture, Forestry, and Home Economics combined have only 11% in this occupational category.

The third most frequent occupational classification is "own or manage a business". In 1973, 14% of freshmen's parents were in this group for all colleges. The College of Liberal Arts and General College accounted for 16%; the Institute of Technology had 13%; the Colleges of Agriculture, Forestry and Home Economics combined had 10%. These percentages are all slight decreases from those in the tables for 1967. The figures were 17% for all colleges, 19%-20% for the College of Liberal Arts and General College, 16% for the Institute of Technology, and 13% for the Colleges of Agriculture, Forestry, and Home Economics combined.

The remaining occupational groupings (40%) are distributed as follows. Ten percent of students had parents in sales occupations. General College lead this division with 13%, while the Institute of Technology was lowest with nine percent. In 1967, the sales group also accounted for 10%. This occupational group has not changed its contribution to the enrollment pattern.

Six percent of students had parents who own or manage a farm. The combined Colleges of Agriculture, Forestry, and Home Economics logically lead this group with 16% in the farming business. The College of Liberal Arts, the Institute of Technology, and General College each had less than five percent in this category.

Semi-skilled workers also accounted for six percent for all colleges combined. The Colleges of Agriculture, Forestry, and Home Economics combined had eight percent, and the College of Liberal Arts, the Institute of Technology, and General College each had five percent.

The office and clerical occupations contributed four percent to the 1973 freshman class for all colleges, a three percentage point drop from the 1968 report. The College of Liberal Arts and the Institute of Technology each had four percent. General College and the combined Colleges of Agriculture, Forestry, and Home Economics each had six percent.

The remaining classification, "other", constituted 11%. Since this category is undefined, however, one can say little about this group other than that it increased four percent over the 1968 report.

Fathers' Education

TABLE 4

Paternal Education of Entering Freshmen, 1973 (Fall)

Sexes Combined

Education	Colleges					
	CLA %	IT %	GC %	AFHE %	All Colleges[1] %	U.S. Colleges[2] %
Eighth Grade or Less	5	7	9	8	8	4
Some High School	5	6	9	5	7	8
High School Graduate	30	28	34	36	32	23
Business or Trade School	1	0	1	1	1	5
Some College	18	17	22	16	17	16
College Graduate	25	30	18	21	21	24
Professional Degree	7	3	2	5	5	--
Post-Graduate Work	2	2	2	0	2	3
Graduate Degree	7	7	3	8	6	16
N	3004	532	622	412	6758	

[1] All Campuses.

[2] From ACE study.

Another indicator of the socio-economic background of freshmen is the educational achievement of their parents. Table 4 shows the educational level of the freshmen's fathers. Two indicative changes between the 1968 study and the 1973 study are the decrease in non-high school graduates and the increase in college graduates. In 1967, 16% of the fathers had not finished high school; in 1973, the figure was only 10%. In 1967, 14% had received college degrees; the 1973 figure was 21%.

The number of those who continued their education after high school by attending a trade school or by completing some college work without earning degrees remained constant at 18% for each year reported.

The pattern for professional and graduate degrees again shows an increase. Professional school graduates added another two percent to the freshman enrollment, for a total of five percent in 1973. Fathers who earned graduate degrees doubled their percentage from three percent in 1967 to six percent in 1973. The percentage of fathers who did post-graduate work but did not get graduate degrees remained at the two percent level reported in 1968.

More freshmen in 1973 had fathers with college, professional, and graduate degrees than did those in 1967. In fact, the fathers of the 1973 freshman class show an increase of 13 percentage points among college graduates and a decrease of six percentage points among non-high school graduates.

This raises some questions as to the success of the University's programs for economically deprived and minority students, supposedly designed to increase the enrollment of the children of non-college graduates who, generally, are at the lower end of the income scale.

Mothers' Education

TABLE 5

Maternal Education of Entering Freshmen, 1973 (Fall)

Sexes Combined

Education	Colleges					
	CLA %	IT %	GC %	AFHE %	All Colleges[1] %	U.S. Colleges[2] %
Eighth Grade or Less	3	3	5	4	4	2
Some High School	4	4	8	[illegible]	6	6
High School Graduate	45	50	54	45	47	38
Business or Trade School	3	1	1	7	2	8
Some College	24	20	21	21	23	18
College Graduate	18	18	9	17	16	19
Professional Degree	0	0	0	1	0	--
Post-Graduate Work	1	1	1	0	1	3
Graduate Degree	2	3	1	3	2	5
N	3024	533	621	415	6758	

[1]All campuses.

[2]From ACE study.

Some psychologists and sociologists say that we live in a maternally dominated society, as far as the rearing of off-spring is concerned. If this were true, the educational level of freshmen's mothers may be more influential than that of the fathers. Table 5 shows the educational level of the 1973 freshmen's mothers.

As in the pattern for fathers, mothers had more education in 1973 than in 1967.

The number of freshmen's mothers without high school diplomas dropped from 16% in 1967 to 10% in 1973. The number receiving only high school diplomas dropped from 51% in 1967 to 47% in 1973, a decrease of four percent.

The number of women doing post-high school studies rose by three percent over 1967 (i.e., from 22% in 1967 to 25% in 1973). The percentage of mothers earning college degrees also rose markedly. In 1967, nine percent of the freshmen's mothers had college degrees; in 1973, the figure was 23%, more than a 150% increase.

This increase did not include the graduate, professional, and post-graduate levels of education. As in 1967, less than one percent of the 1973 mothers had professional degrees. Only three percent had graduate degrees. As in 1967, only one percent did some post-graduate work in 1973.

In summary, the mothers of 1973 freshmen showed more education in both the post-high school and college levels but dropped in high school diplomas only and did not advance in the professional and graduate degrees. Women's "lib" groups may need to investigate the reasons why there has been no increase beyond the college level and why there has been a decrease for the high school diploma level.

TABLE 6

Comparison of Maternal-Paternal Levels of Education

for Fall, 1967 and 1973, Entering Freshmen

Educational Level	1967		1973	
	Maternal %	Paternal %	Maternal %	Paternal %
No High School Diploma	25	16	15	10
High School Graduate	51	36	47	32
Business or Trade School or Some College Work	22	18	25	18
College Graduate	9	14	23	21
Post-Graduate Work	1	2	1	2
Professional or Graduate Degree	1	6	2	11

The Ability Picture

TABLE 7

Ability Characteristics of Entering Freshmen, 1973 (Fall)

Median Scores, Sexes Combined

Variable	Colleges									
	CLA		IT		GC		AFHE		All Colleges[1]	
H.S. Percentile Rank	80		87		36		81		76	
MSAT Percentile	72		77		25		67		64	
H.S. Academic GPA	3.11		3.33		2.11		3.10		2.94	
H.S. Overall GPA	3.13		3.35		2.18		3.14		2.99	
	M	F	M	F	M	F	M	F	M	F
ACT English	21	21	22	25	15	18	20	22	21	20
Mathematics	27	25	30	29	16	15	27	24	25	23
Social Studies	25	25	27	28	16	12	22	25	22	22
Natural Science	29	27	30	30	19	17	29	26	26	25
Composite	26	24	27	28	17	14	24	24	23	22
N (Approximate)	3130		557		672		419		7028	

[1] All campuses.

Since academic success is basic to entering freshmen, Table 7 provides the best indicators of how the freshmen stand in terms of academic potential. The entering freshmen at the Twin Cities campus have good academic ability.

High School Rank

The average freshmen in the College of Liberal Arts, the Institute of Technology, and the combined Colleges of Agriculture, Forestry, and Home Economics finished high school at the eightieth percentile or above, which means that more than half have come from the top 20% of their graduating classes.

TABLE 8

High School Percentile Rank for Entering Freshmen

Sexes Combined

Year	CLA	IT	GC	AFHE	All Colleges
1967	78	88	33	75	74
1973	80	87	36	81	76

A comparison of 1967 and 1973 high school percentiles shows no real difference. General College still has the lowest high school percentile rank (36) but did move up three points from 1967. The combined Colleges of Agriculture, Forestry, and Home Economics made the largest gain with an increase of six points.

Minnesota Scholastic Aptitude Test

The Minnesota Scholastic Aptitude Test (MSAT) reflects a freshman's college ability and his general intelligence in terms of academic background.

The scores reported here are percentiles derived from norms for Minnesota college freshmen.

TABLE 9

MSAT Percentile Rank for Entering Freshmen

Sexes Combined

Year	CLA	IT	GC	AFHE	All Colleges
1967	78	85	26	61	69
1973	72	77	25	67	64

The College of Liberal Arts decreased by six points, the Institute of Technology was down eight points, General College was reduced by one point, and "all colleges" dropped five points. Only the combined Colleges of Agriculture, Forestry, and Home Economics showed an increase (six points) in 1973. In this study, no evidence explains why this decrease in MSAT scores occurred.

High School Grade Point Averages

The high school academic grade point average is based on grades received only in those subjects labeled academic in high school records. The overall high school grade point average is based on grades received in all subjects taken. As expected, the overall grade point average is slightly higher than the academic grade point average.

TABLE 10

High School Academic Grade Point Average for Entering Freshmen

Sexes Combined

Year	CLA	IT	GC	AFHE	All Colleges
1967	2.86	3.22	1.81	2.69	2.72
1973	3.11	3.33	2.11	3.10	2.94

TABLE 11

High School Overall Grade Point Average for Entering Freshmen

Sexes Combined

Year	CLA	IT	GC	AFHE	All Colleges
1967	2.88	3.22	1.91	2.74	2.73
1973	3.13	3.35	2.18	3.14	2.99

Somewhat surprising, in light of the MSAT decreases, are the grade point average increases for all categories in 1973. The College of Liberal Arts and the combined Colleges of Agriculture, Forestry, and Home Economics moved from a high "C" into the "B" range; the Institute of Technology continued in the "B" level; General College rose from below a "C" to the middle of the "C" grade range.

American College Testing Program

All high school seniors who apply to the University of Minnesota are required to take the examinations of the American College Testing Program (ACT). Table 7 contains the mean scores for the ACT tests of those freshmen who entered the Twin Cities campus in the fall of 1973.

Berdie observed noticeable differences in scores between the sexes in 1967 and observed that the women in his study tended to have lower scores on the mathematics section than did the men. Despite a slight increase in the women's scores for this section in 1973, this trend continued. In all four colleges, the men still scored higher than the women. In the College of Liberal Arts, the Institute of Technology, and the combined Colleges of Agriculture, Forestry, and Home Economics, women raised their scores about two points. Naturally, the Institute of Technology freshmen (both male and female) had the highest mathematics scores of the four colleges.

English scores were fairly even between the sexes but dropped overall from 1967. As in 1967, the women in the Institute of Technology, in General College, and in the Colleges of Agriculture, Forestry, and Home Economics in 1973 scored slightly higher in English than did the men in those colleges.

An appraisal of the social sciences scores for 1973 reveals a decrease across the board. Men in the Institute of Technology were the only group to make the same score as in 1967.

A review of the natural sciences scores shows an increase of two points in the College of Liberal Arts and in the combined Colleges of Agriculture, Forestry, and Home Economics. Scores for the Institute of Technology and for General College remained constant between 1967 and 1973.

The composite scores remained approximately the same for the College of Liberal Arts, the Institute of Technology, and the combined Colleges of Agriculture, Forestry, and Home Economics but dropped one point for men and three points for women in General College.

Generally, the ACT scores show a slight gain for the 1973 freshmen over 1967. The uniform reduction in the social sciences scores for both sexes across all colleges, however, raises some interesting questions. Could it be that high school curricula are reducing their social science programs? Could the fact that the highest scores for "all colleges" are in mathematics and natural sciences further indicate a curriculum shift away from English and social sciences and toward mathematics and natural sciences? Overall, the freshmen in 1973 are slightly more capable in mathematics and natural sciences than the already capable freshmen of 1967.

Financing of Education

TABLE 12

Sources of Income for All Colleges of Entering Freshmen, 1973 (Fall)

Percent of Income	Family		Work		Savings		Loan		Scholar-ship		Other	
	N	%	N	%	N	%	N	%	N	%	N	%
100	641	14	36	1	210	4	24	1	102	2	52	1
80-99	423	9	47	1	112	2	56	1	68	1	38	1
60-79	439	9	69	1	181	4	115	2	140	3	44	1
40-59	750	16	362	8	592	12	272	6	374	8	29	1
20-39	673	14	1113	23	975	21	517	11	493	10	20	--
01-19	464	10	862	18	950	20	234	5	221	5	28	1
00	1357	29	2258	48	1727	36	3529	74	3349	71	4536	96
N Totals (Sample % = 68)	4747		4747		4747		4747		4747		4747	
Non-Response (32%)											2284	
Total Potential Respondents											7031	

Table 12 is a new addition to the freshman study. Consequently, no comparable data are in the 1968 study.

As the rate of inflation has escalated, the economic factors loom ever larger in the availability of higher education to even middle income families. Tax-supported colleges and universities have been forced to increase their tuition, thus reducing their service to those who cannot find the finances, no matter how much ability they may have.

Table 12 shows that 52% of the 1973 entering freshmen indicated they were working in their first year. About one-third (31%) of them earned 20% to 49% of their income. Seventy-one percent of the freshmen, however, still depended on their parents for a crucial part of their income. One-third received 60% to 100% from their families; another third received 20% to 59% from this source. Of the remaining third, 10% received from one percent to 19% of their income from their families, and 29% got no parental support. Just under one-third of the entering freshmen were totally self-supporting.

How do freshmen finance their educations beyond the family and work sources? Sixty-four percent have savings which they use to pay the increasing costs of learning. Approximately one-fourth pay from their savings 40% to 100% of the costs of their education. One-third do not have any savings to fall back on at all.

Much has been made of the increasing federal and state loan and scholarship programs. On close inspection, however, this assistance is not impressive. Only one-fourth (26%) of entering freshmen were able to receive any loan funds. Of this group, ten percent got 60% to 100% loan assistance, 34% got 20% to 59% of their income through loans, and 74% got no help. The amount of these loan funds guaranteed to minorities is important, since this practice reduces even more the funds available to those not belonging to a minority group.

Since loans received by freshmen, who probably seek similar financial assistance in the remaining three years, must be repaid with interest during the students' first years of employment, it seems somewhat inexplicable that more loan funds are not available for educating college students, whose educations will directly serve our society.

The scholarship, a long tradition in higher education, was, in the past, used as a reward for academic excellence rather than as a general economic aid program. Twenty-nine percent of the entering freshmen of 1973 received scholarships. Scholarship aid covered 60% to 100% of costs for only six percent of the one-third fortunate enough to be selected. Eighteen percent received aid sufficient to cover 20% to 59% of their education costs. Seventy-one percent did not get any scholarship funds. At least the students with scholarships have the advantage of not having to repay with interest what they received.

More financial aid of all kinds is needed if equal opportunity for students with college capability is to be feasible in this time of inflationary trends.

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